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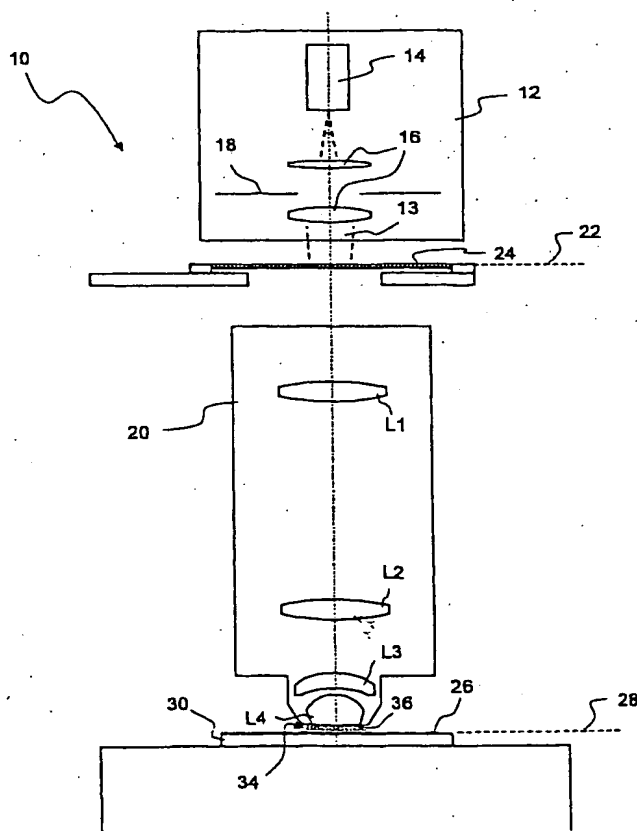
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(54) Title: MICROLITHOGRAPHIC PROJECTION EXPOSURE APPARATUS AND IMMERSION LIQUID THEREFORE



(57) Abstract: An immersion liquid for a microlithographic projection exposure apparatus is enriched with heavy isotopes. This reduces the chemical reactivity, which leads to an extension of the lifetime of optical elements which come in contact with the immersion liquid. For example, heavy water (D₂O), deuterated sulfuric acid, (D₂SO₄) or deuterated phosphoric acid D₃P¹⁶O₄ may be used. Organic compounds such as perfluoro polyethers, which have been deuterated or enriched with heavy oxygen (¹⁸O), are furthermore suitable.

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